

**GENERAL SERVICES ADMINISTRATION**  
**OFFICE OF INSPECTOR GENERAL**

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**AUDIT OF PBS'S MAJOR REPAIR AND  
ALTERATIONS PROGRAM  
REPORT NUMBER A040176/P/R/R05010**

**September 26, 2005**



U.S. GENERAL SERVICES ADMINISTRATION  
Office of Inspector General

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Date: September 26, 2005

Reply to: Deputy Assistant Inspector General  
Attn of: For Real Property Audits (JA-R)

Subject: Audit of PBS's Major Repair and Alterations Program  
Report Number A040176/P/R/R05010

To: Anthony E. Costa  
Acting Commissioner, Public Buildings Service (P)

This report presents the results of our review of PBS's major repair and alterations program. We found that PBS is making progress in developing a comprehensive plan to address its long-term capital reinvestment requirements, but more needs to be done. PBS has developed a methodology using multiple information systems to identify building deficiencies and then to inventory and schedule the repair and alterations projects for its buildings. However, the methodology is not being implemented on a consistent basis and PBS has not fully developed its strategy to repair or modernize its buildings nor does it establish the relative benefits and priorities of all competing projects. As such, PBS needs to take additional steps toward ensuring the effective planning for its building repair and modernization requirements. These steps include ensuring the data for its building reinvestment requirements is obtained and maintained, developing and implementing a new strategy to repair and modernize its buildings, and strengthening the prioritization methodology for the nationwide reinvestment forecast.

If you have any questions regarding this report, please contact me or Regina O'Brien, Deputy Assistant Inspector General for Real Property Audits, on (202) 219-0088.

  
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**EXECUTIVE SUMMARY**

**Purpose**

The objective of this audit was to determine if GSA has an effective strategy to repair and modernize Federally owned buildings. We assessed whether GSA identifies total repair and alteration requirements in their owned buildings and estimates their cost; evaluates the economic and operational implications of the requirements in each building; and, sets forth a strategy to repair and modernize these buildings.

**Background**

The General Services Administration (GSA) Public Buildings Service's (PBS) manages one of the largest building inventories in the nation. GSA owns over 1,200 active buildings with over 175 million rentable square feet. However, GSA has been struggling to keep up with the growing repair and modernization needs of its building inventory. The average age of the buildings in GSA's inventory is 43 years old and every year PBS performs a wide variety of projects to repair, maintain, and modernize GSA's building inventory. However, between fiscal years (FY) 1999 and 2004, GSA's repair and alteration work that needed to be completed on Federal buildings increased from a total of \$4 billion to over \$6 billion.

In a March 2000 report, the U.S. Government Accountability Office (GAO) asserted that GSA did not have a comprehensive plan that (1) identified its total repair and alteration requirements and funding needs, (2) established the benefits and priorities of all competing projects, and (3) proposed a strategy to repair its most deteriorated buildings. However, the report did credit GSA with several initiatives that would help it improve its management including standardizing and improving its asset business plans, the development of a 5-year repair and alteration plan for all prospectus level work, and improving information systems supporting the repair and alterations program.

**Results in Brief**

PBS is making progress in developing a comprehensive plan to address its long-term capital reinvestment requirements, but more needs to be done. PBS has developed a methodology using multiple information systems to identify building deficiencies and then to inventory and schedule the repair and alterations projects for its buildings. However, the methodology is not being implemented on a consistent basis and PBS has not fully developed its strategy to repair or modernize its buildings nor does it establish the relative benefits and priorities of all competing projects.

**Recommendations**

To remedy the situation, PBS needs to take additional steps toward ensuring the effective planning for its building repair and modernization requirements. These steps include ensuring the data for its building reinvestment requirements is obtained and maintained, developing and implementing a new strategy to repair and modernize its buildings, and strengthening the prioritization methodology for the nationwide reinvestment forecast.

**Management Comments**

In his September 16, 2005 response to the draft audit report, the Acting Commissioner of the Public Buildings Service agreed with the contents, conclusions, and results of the report and provided specific comments.

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**INTRODUCTION**

**Background**

The General Services Administration (GSA) Public Buildings Service's (PBS) mission is to provide a superior workplace for the federal worker and superior value to the American taxpayer. To carry out this mission, PBS manages one of the largest building inventories in the nation. GSA owns over 1,200 active buildings with over 175 million rentable square feet. The average age of the buildings in GSA's inventory is 43 years old and every year PBS performs a wide variety of projects to repair, maintain, and modernize GSA's building inventory ranging from small projects such as re-painting or re-carpeting office space to replacing building systems such as heating and air-conditioning systems to total building renovations. To date, a quarter of the buildings have undergone an extensive modernization.

However, GSA has been struggling to keep up with the growing repair and modernization needs of its building inventory. At the end of fiscal year (FY) 1999, GSA's repair and alteration work that needed to be completed on Federal buildings was estimated to total \$4 billion. At the end of FY 2004, GSA's annual report estimated that the repair and alteration work had grown to over \$6 billion. One major factor in this growth is that available funding for these projects is limited. The projects are funded yearly through the Federal Buildings Fund (FBF), a revolving fund financed by rents received from other agencies. However, the FBF has not generated sufficient income over the years to keep up with all of the needs of GSA's building.

Project funding is provided in lump sum for basic repair and alterations and in specific amounts for certain projects that exceed the prospectus threshold established by Congress (currently set at \$2.36 million). The FY 2005 budget provided \$333 million for basic repairs and alterations and \$554 million for prospectus level projects. To obtain funding for a prospectus project, PBS is required to submit a prospectus<sup>1</sup> to Congress for approval. Prospectuses are developed by PBS Regional management based on the PBS National Office's Capital Investment and Leasing Program (CILP) Call that outlines all the requirements that must be met for a prospectus-level project to be considered for inclusion in the budget for that FY's major repair and alterations program, including all the required financial and technical documentation. The PBS National Office ranks the proposed prospectus projects using the Expert Choice

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<sup>1</sup> The prospectus includes the description and location of the project, a list of the impacted tenants, a justification statement, an estimate of the maximum cost to the United States, and a listing of any prior authority and funding.

software program that uses economic and asset infrastructure criteria to analyze and prioritize the list of proposed projects for the budget submission.

In the past, the U.S. Government Accountability Office (GAO) has reported on GSA's difficulty in overcoming long-standing obstacles in its repair and alterations program such as inadequate program data, lack of a multi-year repair and alteration plan, and limited funding. In a March 2000 report<sup>2</sup>, GAO asserted that GSA did not have a comprehensive plan that (1) identified its total repair and alteration requirements and funding needs, (2) established the benefits and priorities of all competing projects, and (3) proposed a strategy to repair its most deteriorated buildings. However, the report did credit GSA with several initiatives that would help it improve its management including standardizing and improving its asset business plans, the development of a 5-year repair and alteration plan for all prospectus level work, and improving information systems supporting the repair and alterations program.

The importance of GSA's management of its real property assets has grown as the visibility of asset management has increased throughout the government. In January 2003, GAO designated federal real property as a new high-risk area due to the persistence of problems including excess and underutilized property, heavily deteriorating facilities, lack of reliable government-wide real property data for strategic asset management, and reliance on costly leasing instead of ownership to meet new space needs. Likewise, asset management is now a component of the President's Management Agenda used by the Office of Management and Budget to evaluate agency performance.

### ***Objective, Scope, and Methodology***

The objective of this audit was to determine if GSA has an effective strategy to repair and modernize Federally owned buildings. We assessed whether GSA:

- Identifies total repair and alteration requirements in their owned buildings and estimates their cost;
- Evaluates the economic and operational implications of the requirements in each building; and,
- Sets forth a strategy to repair and modernize these buildings.

To gain an understanding of the major repair and alterations program and the processes used by PBS, we reviewed guidelines, policies, procedures, prior audits, and studies related to the program; held discussions with Regional and National Office officials; and assessed funding and general program data.

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<sup>2</sup> Federal Buildings: Billions Are Needed for Repairs and Alterations (GAO/GGD-00-98, March 30, 2000)



To accomplish our objectives, we performed the following tasks:

- Obtained and analyzed a snapshot of repair and alterations data pulled from IRIS as of September 30, 2004
- Assessed the role of the Asset Business Plan (ABP), Physical Condition Survey (PCS), Web-based Building Evaluation Report (Web-BER), Inventory Reporting Information System (IRIS), and Project Information Portal (PIP) systems in PBS' repair and alterations business process
- Defined the National and Regional repair and alteration strategies currently in place
- Conducted interviews with personnel from private sector companies about best practices, software and technology tools, and current trends in asset management

For detailed review and analysis, we selected major repair and alterations projects on a judgment basis from those submitted by the Regions for the FY2004, FY2005, and FY2006 CILP. We interviewed the appropriate Regional project-related staff to discuss the identification and development of the project and associated costs, the reasoning behind any delays in funding, and the financial and customer impact of the delays. Additionally, we reviewed, on a judgment basis, the Facility Condition Index for a sample of buildings over 100,000 square feet.

Our audit work was conducted in the National Office and the National Capital, Great Lakes, and Pacific Rim regions during the period May 2004 through March 2005 in accordance with generally accepted government auditing standards.

## **RESULTS OF AUDIT**

The Public Buildings Service (PBS) is making progress in developing a comprehensive plan to address its long-term capital reinvestment requirements, but more needs to be done. PBS has developed a methodology using multiple information systems to identify building deficiencies and then to inventory and schedule the repair and alterations projects for its buildings. The information developed through this methodology forms the basis of a nationwide forecast for addressing building reinvestment needs. However, the methodology is not being implemented on a consistent basis, which may be an obstacle to effectively managing its reinvestment requirements. In addition, PBS has not fully developed its strategy to repair or modernize its buildings nor does it establish the relative benefits and priorities of all competing projects.

To remedy the situation, PBS needs to take additional steps toward ensuring the effective planning for its building repair and modernization requirements. These steps include ensuring the data for its building reinvestment requirements is obtained and maintained, developing and implementing a new strategy to repair and modernize its buildings, and strengthening the prioritization methodology for the nationwide reinvestment forecast.

### **The Reinvestment Requirements Are Large**

The reinvestment requirements of the GSA building inventory have been an issue for some time. In 1991, the General Accounting Office<sup>3</sup> (GAO) reported on the repair and alteration needs of GSA's building inventory<sup>4</sup> and in 2000, GAO again reported on these needs citing an estimated \$4 billion in estimated repair and alteration work identified. At the beginning of FY 2005, the repair and alteration needs had grown to over \$6 billion for PBS's inventory of prospectus-level repair and alterations projects. As such, GSA's budget for prospectus repair and alterations projects, which has averaged about \$600 million over the past three years, is challenged to reduce this growing workload.

In the 2000 report, GAO cited GSA's lack of a comprehensive plan that (1) identifies the total repair and alteration needs and corresponding funding requirements, (2) establishes the benefits and priorities of all competing projects, and (3) proposes a strategy and the funding needed to repair or modernize its most seriously deteriorated buildings, as an impediment to improving the situation. However, GAO did note that GSA had several initiatives that, if fully developed and implemented, could lead to better program oversight and a more strategic approach to managing repair and alteration needs. These initiatives included a system to consistently record and track the status of each identified repair and alteration work item, to develop more accurate cost estimates, and to

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<sup>3</sup> Now known as the Government Accountability Office.

<sup>4</sup> Federal Buildings: Actions Needed to Prevent Further Deterioration and Obsolescence (GAO/GGD-91-57, May 13, 1991)

establish priorities for the identified repairs and alterations as well as developing a 5-year repair and alteration plan that includes all prospectus-level work in priority order and the estimated funding needed to complete the work.

### **PBS Has Methodology to Identify and Track Its Repair and Alteration Needs**

PBS has a process to assess the capital reinvestment requirements for its building inventory that includes a methodology for identifying and tracking repair and alteration requirements for its buildings. The methodology is based on a multi-level assessment of reinvestment needs using Physical Condition Surveys (PCS) to obtain a general assessment of all buildings and Web-based Building Evaluation Reports (Web-BER) to provide a more detailed assessment of those buildings targeted for repairs, and then using the Inventory Reporting Information System (IRIS) to inventory and schedule the repair and alteration requirements for the buildings. PBS has outlined this methodology in two documents: the GSA WEB Building Evaluation Instructions that is online at the PCS web-site and the Repairs and Alterations Program Guidance that was issued in May 2003. The systems are discussed in more detail in Appendix A.

The PBS National Office also has a goal to develop a comprehensive 5-year forecast for major repair and alterations projects using the project information from the IRIS system. For the FY 2006 planning cycle that occurred in FY 2004, the National Office required regional management to input their projects anticipated for FY 2006 through FY 2010 into IRIS, so that the National Office could compile those projects into a single nationwide 5-Year Capital Reinvestment Plan<sup>5</sup>. The regions were also required to utilize the regional 5-year plans to schedule the technical documents and studies required for submission under the CILP by the PBS Commissioner's December 2003 memo entitled, "Cost Effective Delivery of the Capital Construction Program."

### **The Methodology Improvements Needed**

To effectively manage the repair and modernization program, PBS needs consistent, accurate, and complete information on all repair and alteration requirements. PBS relies on the use of the PCS, web-BER, and IRIS to develop this information. Although these systems are part of the same process, the repair and alteration information is maintained and updated separately because the information is based on different assessments and the data on building requirements or corrective actions is not shared. However, the data is not being maintained consistently because the regions have not fully implemented the process outlined by the PBS National Office. The inconsistent implementation may impede PBS's ability to manage the repair and modernization program as

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<sup>5</sup> According to PBS management, the document functions as a forecast rather than a plan as the objective is to ascertain the projects that are being contemplated for future funding and is not intended to list projects in a definitive sequence.

current and complete data for the entire building inventory is spread among the three systems in varying degrees.

## **PCS**

National Office requires regions to update the data in the PCS system on a 2-year cycle; however, it is unlikely that the requirement will be met for the current cycle, which ends in September 2005. Based on an evaluation of the date stamp in the PCS system which indicates the last time surveys of individual buildings were updated, two of the three regions had yet to update a significant portion of their building surveys - from FY 2004 through the end of the second quarter of FY 2005, one region had updated 21 percent of its building surveys and the other had only updated six percent. In one of these regions, Regional Officials stated that PCS surveys were not performed in FY04 and need to be scheduled for FY05. As such, the PCS is not being updated regularly with consistent assessments of the physical condition of the building inventory, which may limit its usefulness as a strategic planning tool.

## **Web-BER**

The utilization of web-BERs varies among the regions we reviewed. The web-BER can cost in excess of \$70,000 and is most cost effective when used early in the planning process to assist in scoping the repair projects. Accordingly, one of the three regions has incorporated web-BERs into the early planning process for prospectus projects and performs the web-BER as part of the feasibility study for the repair and alteration project.

Another region performed web-BERs for the majority of its buildings to help manage its building portfolio. According to National Office guidance, the data in the web-BER system needs to be updated for corrective completed work. However, the data in the web-BER system does not appear to be maintained on a regular basis. As of March 2005, only two of the region's 113 buildings in the web-BER system had been updated for corrective measures. On a national level, only 11 of the 519 buildings and building sites<sup>6</sup> web-BERs that had been entered into the system had been updated for corrective measures. The web-BERs' usefulness for planning prospectus projects diminishes and their results can become obsolete if the building condition data are not maintained.

In contrast, the third region performs web-BERs primarily to comply with the submission requirements for prospectus projects. If these web-BERs are performed to meet the budget submission requirements and are not utilized during the planning stages of a project when the project requirements are being

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<sup>6</sup> According to PBS National Office, although the web-BER system contained evaluations for 519 buildings and building sites at the time of this analysis, only about 300 web-BER evaluations had been completed as of June 2005. The number of web-BER evaluations is less than the number of buildings as a single BER may cover a "campus" formed by a group of buildings.

developed, it is likely the study will add little value except as a final check to ensure all problems with a building were already identified.

### **Correlation Between PCS and Web-BER Studies**

To gauge building condition, a value known as the Facility Condition Index (FCI) is developed by both the PCS and the BER. The FCI is a ratio of the value of a property's existing deficiencies to the entire replacement value and is measured on a scale of 0 to 1.00. An FCI that is less than 0.10 indicates a building is in good condition and an FCI over 0.20 indicates a building is in poor condition. We compared the FCI values generated by the PCS to their respective FCI generated by web-BER for 26 buildings over 100,000 square feet. As expected, since a web-BER is more detailed than a PCS, the web-BER FCI was higher in most cases. However, the differences between the two building assessments ranged from a negative 0.63 to a plus 0.49 and only six were within 0.10 of each other (see Appendix B). Thus, the correlation of the PCS and Web-BER results are not always consistent in assessing building reinvestment requirements.

### **IRIS**

Inaccurate data in IRIS can also impair the development of a nationwide reinvestment forecast. A requirement of the CILP process is that the costs of projects submitted must match exactly with the costs information in IRIS. The National Office has been working with the regions to ensure that the requirement is met. In June 2004, the National Office began discussions with the regions after testing the accuracy of IRIS data and finding that there was a \$243 million difference in absolute value between what the regions submitted for major repair and alterations projects during the budget planning cycle and what IRIS reported on the nationwide reinvestment plan. Similarly, our review of the project costs in IRIS for those projects submitted for FY06 CILP for Regions 5, 9, and NCR showed that the project cost data for 11 out of the 24 buildings did not match that in IRIS. In addition, the status of some projects in the inventory was not being updated. For example, during the budget cycle for 2006, there were still over \$130 million of unfunded projects in the inventory for FY 2001 through FY 2004. In discussions, Regional Officials stated that they do not use IRIS to manage their Regional 5-year plan and may only go into IRIS once or twice a year to enter or update the data. Overall, the lack of data management leads to data inaccuracy and may reduce the National Office's ability to use the data to develop a nationwide reinvestment forecast.

### **The National Office's Forecast Needs Prioritization**

One of the major drawbacks of the National Office's 5-year reinvestment forecast is that it does not prioritize the projects being submitted by the regions. When the regions develop their 5-year plans, they are scheduling projects based on regional strategies and priorities. The National Office compiles the project

information from the regional plans, but only prioritizes projects during the yearly budget process. At that time, it only evaluates those projects proposed by the regions for that budget year. The evaluation is a project-by-project approach rather than a comprehensive long-term strategy for addressing GSA's complete repair and alteration inventory.

While a long-term prioritization of the projects has not been developed, PBS has implemented several long-term strategies that indirectly target its repair and alteration funding. These strategies include directing the regions to review the current financial well being of buildings through its Portfolio Restructuring Initiative (also known as Tiering) as well as assessing the long-term plans for individual buildings by mandating the use of Asset Business Plans.

Under Portfolio Restructuring, PBS has undertaken a comprehensive review of its building inventory to restructure and align its portfolio with GSA's mission to keep owned buildings in good repair and to provide Federal agencies with quality space and services at a competitive cost. PBS's strategy was to remove from the owned inventory those assets which are financially under-performing and which require significant repairs. To do this, the National Office began yearly evaluations that categorize the building inventory into tiers based on financial performance and repair and reinvestment needs. To date, this process has resulted in a 20 percent reduction of the tiered building inventory, reducing it by 325 buildings representing almost 13 million square feet with an associated reduction of \$207 million in repairs and alterations. In addition, 704 buildings representing 82 percent of GSA's 175 million rentable square feet are now classified as performing well financially and are earmarked for reinvestment funds.

PBS has also mandated the development of Asset Business Plans for each building. The purpose of the plans is to establish a vision for the asset, to identify and measure the effectiveness of the strategies to achieve the vision, and to continuously improve and update the strategies in order to maximize customer satisfaction and minimize the costs of maintaining the asset. The plan should be used to develop long-range asset strategy, reinvestment plans, and capital investment priorities. PBS has linked the maintenance of data in Asset Business Plans<sup>7</sup> to its performance measurement program to ensure regions update the plans every year. By promoting Asset Business Plans, PBS is assisting the regions to assess the long-term prospects of each building to determine how capital reinvestment funding should be spent.

Although both of these initiatives improve the management of the building inventory, they do not identify where repair and modernization efforts and funding should be concentrated. In order to further target reinvestment funding, PBS is in

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<sup>7</sup> Asset Business Plans repair and modernization information is also directly linked to IRIS. If information in IRIS is not updated timely it affects the accuracy of the plans. The IRIS data link is not part of the performance measure.

the process of developing a set of criteria to categorize its buildings based upon long-term customer needs so that the limited repair and alteration funding will be directed to these assets that will be the core of the building inventory. Aligning the nationwide reinvestment forecast to long-term customer needs should help better focus reinvestment capital toward buildings that are key to the future. To date, this strategy has not been fully defined or documented for implementation.

In addition to developing strategies to determine which buildings should be targeted for reinvestment funds, PBS can benefit from a more structured prioritization of its projects. For example, prioritization could help provide a more realistic outlook for the reinvestment forecast. During the planning cycle for FY 2006 prospectus projects, the regions were instructed to include planned projects from FY 2006 through FY 2010 in IRIS so that the information could be rolled up to generate the 5-Year Capital Reinvestment Plan. We compiled this data from IRIS and found that for FY 2007 through 2010, the yearly funding requirement averaged \$1.1 billion although the funding for these projects over the last three years averaged less than \$600 million. Without prioritization, the reinvestment forecast will not be able to align projects with funding expectations for future years.

Prioritization can also help regional management in managing their resources. For example, the National Office requires 16 different project documents and technical studies to be submitted for projects under consideration for funding during the yearly budget planning cycle. The total cost of all these requirements varies, but in some cases, the costs can exceed \$600,000 and according to regional personnel, they have limited resources to cover the costs of the project studies. In accordance with guidance from the PBS Commissioner, the regions are supposed to be scheduling funding for technical documents required to submit a project for budget consideration based on the 5-year plan. By prioritizing the projects in the reinvestment forecast, regional management may be able to better align their limited funding for these studies as well as their human resources with the higher priority projects rather than having to expend resources on projects that are designated a lower priority. The prioritization may also encourage regions to re-evaluate these projects and make alternative plans on the need for the asset or on how repair needs can be met.

To determine a project's long-term priority, PBS would need to establish a set of criteria that would enable PBS to assess the importance and timing of the projects. These criteria could resemble criteria that is used in other aspects of the repair and alterations program such as customer urgency, physical urgency based on building conditions, project timing as well as historical and community considerations.

## Industry Trends

According to consultants, managing and optimizing organizational resources requires access to information when and where it is needed and that in the future, real time information on all assets will be available along with the ability to drill down to the details. In light of this, the industry trend in both the private and government sector is to use software applications to not only record building condition, but to also assist in planning, prioritizing, and budgeting for repair and modernization projects. The software applications have many features and capabilities that could aid in managing the repair and modernization program.

Similar to GSA's current process, the software applications use on-site inspections or assessments to capture general information about the building as well as data on building condition and requirements. Some systems also allow the user to enter other unique data such as a building's criticality to an organization's mission. Then using this information, the software applications are able to plan and prioritize projects to meet current building needs based on a variety of criteria such as building condition, return on investment, or mission criticality. The software applications can also schedule future needs using system life cycle planning to estimate the future replacement schedule for building systems and components. Additionally, some systems can provide information on the effectiveness of operation and maintenance programs by comparing work performed in a building to industry norms for the specific building systems. Given the trend to contract for building operations, collection and maintenance of building information is needed to ensure proper oversight of contractors as well as ensure data for planning is available.

The software applications can also assist in budget decisions by assessing funding needs and evaluating the effects of different levels of funding. The applications do this by setting performance goals using specific criteria such as facility condition or return on investment and evaluating funding consequences. In some cases, the applications can also evaluate the costs of delaying the needed repairs, replacements, and maintenance of building systems. In addition, several systems can interface with work-order software applications to initiate the repairs in the field.

The web-BER system that is used by PBS has the potential to perform many of the capabilities found in the industry applications. The web-BER provides system life cycle planning, can group individual work items into a large project, can be used to prioritize work items based on their criticality, can be used to create estimates of repair costs, as well as provide other information.

At this time, PBS is in the process of gathering and reviewing information on software systems available within the real estate industry. It issued a request for information in November 2004 for information on technology services and support for a building condition assessment program that will provide ready



access to real-time information on the condition of individual buildings that have undergone building condition assessments along with the ability to quantify the impact of repair and alteration dollars spent. According to PBS National Office, this is exploratory in nature to examine the systems available in the market and not a complete re-evaluation of the processes and systems in place.

## **CONCLUSION**

Real property asset management has been designated as a high-risk area for the Federal government so it is imperative that PBS continues to improve its management. While PBS has made strides in its oversight of the portfolio, repair and modernization needs have grown to an estimated \$6 billion. Some aspects of addressing the physical condition of the real estate portfolio, such as actual funding levels and customer capabilities, are not fully in PBS's control; however, PBS needs to pursue those aspects that it does control. The lack of a comprehensive plan that: (1) identifies the total repair and alteration needs and corresponding funding requirements; (2) establishes the benefits and priorities of all competing projects; and (3) proposes a strategy and the funding needed to repair or modernize its most seriously deteriorated buildings, is viewed as an impediment to improving the oversight of repair and modernization needs. PBS has been active in developing and implementing a comprehensive plan or investment outlook to address its capital reinvestment requirements, but needs to take additional steps before this can be achieved.

PBS's process to identify, plan, and fund repairs and modernizations is dependent upon a series of assessments to identify building conditions and scope projects. The National Office has issued guidance to assist regions. However, the process has not been fully adopted and as such, may not be generating all the information needed to consistently track the status of each identified repair and alteration work item, develop accurate cost estimates for work items, and assist in establishing priorities for identified repairs and alterations. Even if the current guidance was fully followed, the process does not include a way to evaluate the cost benefit of delaying repairs nor does it facilitate system life cycle planning. This information would be valuable in establishing benefits and priorities among projects and assist in evaluating funding strategies.

PBS needs to continue to refine and develop strategies for addressing the repair and modernization needs of its buildings. First, it must address the issue of consistent, accurate and complete data. The current approach to collecting and maintaining data is cumbersome and the guidance is not consistently followed which impairs the reliability of the data. Additionally, as mentioned above, it does not provide some beneficial enhancements. As PBS reviews software applications available in the industry, it can compare the current methodology and systems it is utilizing to the alternatives. The optimal tool supports a process that can facilitate and improve the day-to-day operations at the Regional level without excessive burden and also provides the information needed by Regional

and National Office personnel to manage the overall program while being cost effective.

Regardless of whether PBS retains the current systems or selects a new one, it must then advocate its processes and ensure the system data is maintained. As part of advocating the processes and system, guidance should be clear and explain the relationship to other asset management strategies, such as the Asset Business Plan. To ensure system data is maintained properly, PBS may wish to consider incorporating data maintenance as a requirement for the performance measurement system similar to the requirement to update data in the Asset Business Plans or possibly develop a performance measure related to the management of these assets that is dependent on the data in the systems.

Finally, PBS should continue to develop the criteria needed to determine which buildings should be targeted with the agency's limited funding. PBS also needs to develop a method to prioritize the projects being proposed by the regions. Currently, Regional personnel develop projects and interact with customer agencies to move projects forward in accordance with their own Regional strategies and priorities, the National Office needs to be able to assess and prioritize these projects in light of the requirements of the entire building inventory. This prioritization should work in partnership with the strategies PBS has in place to address the overall repair and modernization requirements within the agency's building inventory.

## **RECOMMENDATIONS**

We recommend that the Commissioner of the Public Buildings Service continue to work toward a comprehensive plan to address the repair and modernization requirements of the GSA building inventory. To maintain this effort, PBS should:

1. Ensure the data for its building reinvestment requirements is obtained and maintained in accordance with the prescribed methodology. To do this, PBS should consider:
  - a. Whether it is cost effective to streamline or enhance the current process through software applications.
  - b. Incorporating data maintenance as a performance measure.
2. Advocate its processes and systems to assess building condition, to identify building deficiencies, and to schedule work items; and in conjunction, review its guidance to ensure it is clear and identifies how other asset management initiatives relate to this process.
3. Continue to develop and complete an agency-wide strategy to systematically define the current and projected building inventory that is needed to meet customer agency long-term needs so that planning and funding for

prospectus-level repair and alteration projects can be targeted to those assets.

4. Develop a methodology to prioritize the prospectus-level projects being proposed by Regional Management and compiled into the 5-year nationwide reinvestment forecast.

## **MANAGEMENT CONTROLS**

As discussed in the Objectives, Scope and Methodology section of this report, our audit objective was to determine if GSA has an effective strategy to repair and modernize Federally owned buildings by: 1) identifying total repair and alteration requirements in their owned buildings and estimating their cost; 2) evaluating the economic and operational implications of the requirements in each building; and; 3) setting forth a strategy to repair and modernize these buildings. The examination of management controls was limited to those necessary to achieve the audit objectives.

## **MANAGEMENT COMMENTS**

In his September 16, 2005 response to the draft audit report (see Appendix C), the Acting Commissioner of the Public Buildings Service agreed with the contents, conclusions, and results of the report and provided specific comments.

## **Audit of PBS's Major Repair and Alterations Program Report Number A040176/P/R/R05010**

### **Appendix A: PBS Repair and Alterations Planning Methodology**

In moving toward implementing a comprehensive plan, the Public Buildings Service (PBS) has developed a methodology to assess the capital reinvestment requirements for its building inventory and to develop a multi-year plan to repair and modernize its buildings. The methodology is based on using a multi-level process to assess reinvestment needs using Physical Condition Surveys (PCS) and Web-based Building Evaluation Reports (Web-BER) and then using the Inventory Reporting Information System (IRIS) to inventory and schedule the repair and alteration requirements for the buildings. The basic steps in the process are discussed below.

#### **The PCS**

The process to identify building deficiencies and develop the multi-year plan of prospectus repair and alterations project begins with the PCS. The PCS is a walk-through self-assessment to ascertain the relative condition of building and infrastructure systems. According to PBS, the PCS is a strategic planning tool that provides a regular consistent assessment of the physical condition of the basic building structure, as well as the infrastructure of GSA's building inventory. It documents the long-term needs of a building and represents the inventory of items in need of repair or replacement. The survey itself consists of a questionnaire focusing on the building and its condition. It can be performed by building management personnel and starting in FY 2004, is required once every two years on all active buildings<sup>8</sup> in GSA's inventory. The results are input into the PCS system, which provides a total dollar value of deficiencies at the macro level that can be used to forecast the building's reinvestment needs and determine asset strategy. The PCS system itself does not generate work items; so Regional personnel need to evaluate the results to identify work items for the building. PBS National Office can use the overall results to assess the infrastructure of GSA's building inventory and presents this data in its budget submission.

#### **The web-BER**

The web-BER is a web-based tool for performing detailed building and infrastructure assessments that allows deficient conditions to be entered in the form of deficiencies as well as a means to correct those conditions to be developed. According to the GSA WEB Building Evaluation Instructions, a web-

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<sup>8</sup> "Active" buildings, for the purposes of this goal, include newly constructed buildings and those undergoing renovations. Buildings reported as excess and accepted by the Office of Property Disposal can be excluded.

BER should be performed based on the results from the PCS to identify deficiencies as well as the means for correcting the deficiencies. Data for the system is developed through a detailed engineering evaluation of a building known as a Building Engineering Report (BER) that is performed by professional architects and engineers under contract. The BER provides recommended corrective actions along with estimates for the replacement costs of building systems and components that are posted in the web-BER. Once completed, Regional personnel need to review the corrective actions identified and determine which ones warrant investment given the overall plan for the particular asset and these will be tracked as work items. The performance of a web-BER is at the discretion of Regional Portfolio Management; however, beginning with the FY 2005 planning cycle, the National Office requires a web-BER for all projects submitted for funding during the yearly budget planning.

### **Scheduling through IRIS**

The purpose of IRIS is to document and schedule the accomplishment of identified building needs, track execution of construction projects, and plan the repair and alterations program. Within IRIS, work items<sup>9</sup> are tracked and managed as they are identified, grouped into projects, and funded. For the prospectus level repair and alterations program, this plan should reflect seven fiscal years.

When Regional personnel identify work items within a building through a PCS, web-BER, or another study, the work item is entered into IRIS. Using PCS results, Regional personnel must interpret the results to identify work items and then develop the necessary estimates. Using web-BER results, Regional personnel must review the recommended work items, determine the actual work items that will be performed, and in some cases develop a new estimate if a repair will be made rather than a replacement. In either case, the National Office has instructed the Regions to only input the repair and alteration investments that an asset team realistically expects to accomplish for a particular building, but no more than that. These work items need to be reviewed and updated by Regional personnel on a regular basis to reflect current estimates, how they will be bundled into projects, and when it makes sense to execute them (design plan year and construction plan year).

In addition, Regional personnel need to ensure that accurate project estimated start dates and actual dates are entered into IRIS so that execution of the overall Repair and Alterations Program can be tracked. Once work has been completed, the personnel must ensure that IRIS is updated to reflect that the applicable deficiencies have been addressed.

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<sup>9</sup> A work item is a repair or construction activity that needs to be carried out in a building.

**Audit of PBS's Major Repair and Alterations Program  
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**Appendix B: Facility Condition Index Comparison**

<b>Region</b>	<b>Building Number</b>	<b>Building Name</b>	<b>FCI Per Web-BER</b>	<b>FCI Per PCS</b>	<b>Difference</b>
1	VT0024ZZ	Burlington Federal Building	0.25	0.08	0.17
1	ME0068ZZ	Edmund S. Muskie Federal Building	0.45	0.53	(0.08)
1	MA0137ZZ	IRS Center	0.35	0.31	0.04
2	NY0282ZZ	Jacob K. Javits Federal Building	0.30	0.42	(0.12)
2	NY0323ZZ	Silvio V. Mollo Federal Building	0.31	0.29	0.02
3	VA0062ZZ	Courthouse Annex	0.38	0.20	0.18
3	WV0054FP	Huntington Federal Building	0.77	0.35	0.42
4	KY0085AA	IRS Service Center	0.24	0.12	0.12
4	AL0039AB	John A. Campbell U.S. Courthouse	0.92	0.57	0.35
4	SC0068AA	Strom Thurmond Federal Building	0.59	0.27	0.32
5	MN0036ZZ	Federal Building	0.17	0.80	(0.63)
5	OH0189CN	John Weld Peck	0.21	0.15	0.06
6	MO0106ZZ	Robert A. Young Federal Building	0.28	0.12	0.16
8	MT0017ZZ	Federal Building - Post Office - Courthouse	0.79	0.57	0.22
9	AZ0058ZZ	Federal Building	0.22	0.14	0.08
9	CA0093ZZ	Federal Office Building	1.24	0.89	0.35
11	DC1415NA	019 Office Building	0.61	0.12	0.49
11	DC0501BC	Auditors Main	0.33	0.15	0.18
11	DC0014ZZ	Courthouse	0.65	0.48	0.17
11	DC0083ZZ	Federal Office Building 10A	0.59	0.36	0.23
11	MD0035AG	Federal Office Building 3	0.80	0.45	0.35
11	DC0021ZZ	General Services Administration Building	0.90	0.53	0.37
11	DC0026ZZ	Lafayette	0.74	0.68	0.06
11	DC0094ZZ	National Courts	0.53	0.33	0.20
11	DC0114ZZ	Tax Court	0.34	0.50	(0.16)
11	DC0082ZZ	Theodore Roosevelt	0.37	0.52	(0.15)

This table presents a comparison of the Facility Condition Index (FCI) calculated by the Web-BER and Physical Condition Survey (PCS) systems for the 26 buildings listed above. The data was downloaded from the systems in March 2005.

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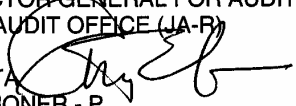
**Appendix C: Management's Response**



GSA Public Buildings Service

SEP 16 2005

MEMORANDUM FOR REGINA M. O'BRIEN  
REGIONAL INSPECTOR GENERAL FOR AUDITING  
REAL PROPERTY AUDIT OFFICE (JA-R)

FROM: ANTHONY E. COSTA   
ACTING COMMISSIONER - P

SUBJECT: Draft Report: Audit of PBS Major Repair and Alterations  
Program Report Number A040176

Thank you for the opportunity to comment on the Inspector General's draft audit report identified above. Ensuring that real property assets under GSA's custody and control are in good condition and repair is of great importance to GSA and our customers. Accordingly, we have made reinvestment funding one of our highest priorities in our budget requests. We have also developed strategies, enhanced supporting tools, and introduced a performance measure to assist with implementation and to monitor progress in repairing and modernizing GSA's Federally-owned buildings.

In general, we agree with the report content, conclusions and results discussion – particularly with the characterization that we are making progress in developing a comprehensive strategy to address GSA's long-term capital reinvestment requirements, however, we have more work to complete. We offer the following specific comments.

On page 6 of the report, you note that it is unlikely that the requirement to update data in the Physical Condition Survey (PCS) system will be met for the current cycle, which ends in September 2005. As of September 9, regions have completed 74% of their surveys for this cycle and are working to achieve 100% by October 1.

On page 7, you note, "The correlation of the PCS and Web-BER results is not always consistent in assessing building investment requirements." We agree, however, the PCS and Web-BER use different methodologies and therefore different results are expected to some extent. The Web-BER is much more detailed and may account for other factors such as historic considerations and ADA compliance issues that may not be included in a PCS's estimate.

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**Appendix C: Management's Response**

- 2 -

Finally, on page 8, you state, "They [PBS] do not identify where repair and modernization efforts and funding should be concentrated."

We have stated through our policies and practices that we seek to maximize investment primarily in Tier 1 and 2a properties. According to the PBS Portfolio Strategy, the goal is to "build an owned inventory comprised primarily of sound financial performers". We understand the difficulty of supplementing FBF receipts with direct appropriations so our Repair and Alterations efforts have been focused on that segment of the inventory that can sustain itself by generating sufficient Funds from Operations (FFO). In practice, an asset's tier weighs heavily in the Expert Choice<sup>®</sup> decision-making process, in which we rank the regions' major R&A proposals.

Finally, we have documented that over the past four years, we have increased our Budget Activity 54 reinvestment dollars in financially performing assets (Tier 1 and 2a) from 63% to 76%. This is primarily due to the focus and guidance offered by the PBS Portfolio Strategy and our Owner's Objectives.

Again, thank you for the opportunity to comment on the draft report. Upon receipt of the final audit report, we will prepare a corrective action plan, which includes the recommendations and PBS proposed actions to remedy the finding/recommendation. Should you have any questions, please contact Mr. William H. Matthews, Assistant Commissioner, Office of Real Property Asset Management, on (202) 501-0638.



**Audit of PBS's Major Repair and Alterations Program  
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**Appendix D: Report Distribution**

Commissioner, Public Buildings Service (P) .....	3
Regional Administrator (5A) .....	1
Regional Administrator (9A) .....	1
Regional Administrator (WA) .....	1
Office of the Chief Financial Officer (B) .....	2
Assistant Inspector General for Auditing (JA, JAO and JAS) .....	3
Assistant Inspector General for Investigations (JI) .....	1
Branch Chief, Audit Follow-up and Evaluation Branch (BECA) .....	1